

Commonwealth of Pennsylvania

DEPARTMENT OF AGRICULTURE
DAIRY AND FOOD BUREAU

BULLETIN No. 285

FLAVORING EXTRACTS

ANALYSIS MADE BY

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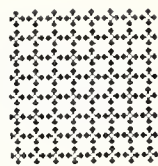


CHAS. E. PATTON, *Secretary of Agriculture*

JAMES FOUST, *Dairy and Food Commissioner*

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PREFACE.

The following investigation of the flavoring extracts on sale in Pennsylvania was made in view of the wide-spread interest which the people of this State have shown in the various statements publicly disseminated to the effect that products of this class are largely composed of worthless substitutes for food material and of low grade materials; because of the very common idea that many of them are injuriously adulterated, and also for the purpose of determining what basis of fact there is to support the extensive claims made for many of these products by the manufacturers.

CHAS. E. PATTON,
Secretary of Agriculture.



LETTER OF TRANSMITTAL.

Harrisburg, Pa., October 11, 1916.

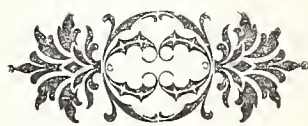
Hon. Chas. E. Patton, *Secretary of Agriculture*:

Dear Sir:—The following report on the composition of flavoring extracts is respectfully presented for the information of all interested in the sale and use of such products.

It is believed that the results will prove of special interest to all who have been led to believe that the numerous articles sold as flavoring extracts are made from worthless substances, and to such users of these flavors as has been induced by the advertisers' claims to believe them to possess special virtue above ordinary products.

Very respectfully yours,

JAMES FOUST,
Dairy and Food Commissioner.



FLAVORING EXTRACTS.

By CHARLES H. LAWALL and LEROY FORMAN

According to the standards of the U. S. Department of Agriculture, promulgated in Circular No. 19, June 26, 1916, "a flavoring extract is a solution in ethyl alcohol of proper strength of the sapid and odorous principles derived from an aromatic plant, with or without its coloring matter, and conforms in name to the plant used in its preparation."

Following this general definition are specific standards for the numerous varieties of flavoring extracts that are found upon the market. In the above definition, the word "sapid" means "having the power of affecting the organs of taste," and is derived from the same Latin word as our much more commonly used word "insipid," which means tasteless. The specification of the use of ethyl alcohol is to prevent the use of the poisonous methyl alcohol or wood alcohol, which was at one time frequently used and which is still occasionally found.

The word "extract" comes from two Latin words meaning to draw out, and has a variety of meanings, both specific and general, as in pharmacy, where there are fluid extracts, pilular extracts and powdered extracts, none of which are used for flavoring purposes. Generally speaking, the word "extract" conveys to the average mind the condition of concentration or condensation rather than dilution or simple solution, as is actually the case in some flavoring extracts.

The word "essence" which is often used synonymously or interchangeably with "extract," has even a more varied meaning than the latter. It is derived from the Latin word meaning "to be" and in general means anything which gives to another thing its peculiar character. It is used for things immaterial as well as those material. In pharmacy, unfortunately the word "essence" is used not only to denote the volatile oils themselves but also their solutions in alcohol prepared for flavoring purposes.

Sometimes in commercial preparations neither the word "extract" nor "essence" is used in connection with the flavoring preparation, but the word "flavor" or "flavoring" may be used alone, or even in some few cases the name of the product may be used alone, as "vanilla" or "lemon." It will readily be seen that while there has been standardization of products, which has been productive of good re-

sults, there has been no accompanying standardization of titles or labels, which after all, seem to need it the most, as it is by their advertised or trade designations that the purchasing public recognizes these preparations.

Modern merchants and manufacturers do not realize that both labeling and advertising are undergoing evolutionary changes which are revolutionary in character. Both labels and advertisements had their beginning at a time when there were neither standards nor laws; when every maker of a product could use his own formula, regardless of the strength of the resulting preparation, could label it anything that he chose and could then describe it in terms which were limited only by his vocabulary and the credulity of the purchasing public. In those days, which are within the memory of the present generation of purchasers, it was customary for a manufacturer to call his product "double strength," if he made it twice as strong as his competitors, which was often the case, but with the advent of standards, which were placed sufficiently high to ensure the production of a preparation of value, the possibility of appreciably exceeding these standards was limited by economic considerations based upon cost of production and competition in finding a market.

In the preparation of the present bulletin, which is intended to be of a popular character, over 200 samples were collected and such an examination was made and has been tabulated as would indicate to the analyst whether the product was in conformity with the standards. As the work was largely of an educational type, only such prosecutions were instituted as were made necessary by flagrant instances of adulteration or misbranding. The total number of such prosecutions was less than a dozen out of the entire lot of samples examined. In those instances, which were fairly numerous, where technical charges of misbranding in some minor particular might have been alleged, the manufacturer received a notice from the Department, calling attention to the points which should be corrected and suggesting the proper way of so doing whenever possible. These letters are a matter of record, and if at some future time another investigation is made of these products, no leniency will be shown to those who have failed to correct labels and claims after having had their attention called to the necessity for so doing.

In studying the data obtained in this investigation it was clearly apparent that some standard method of labeling should be insisted upon by the Department in the interest of uniformity and for the protection and guidance of the public.

In the first place, the flavoring extracts of commerce are made from a widely divergent lot of raw materials, so that it is impossible to place all extracts upon the same plane of equality as regards flavor-

ing power. Some, in fact the majority, are made from what are called the volatile oils of the plants. These volatile oils represent or contain the concentrated aroma of the plants yielding them and are obtained by a process of distillation and purification. They vary greatly in intensity and in the percentage yielded by the plant from which they are separated. Many plants do not yield them at all in amounts which are economically practicable. Among the plants which do yield volatile oils used in making flavoring extracts, however, are the following: Almond kernels (from the bitter variety), aniseed (and an identical oil from a Chinese plant known as Star Anise), celery seed, cinnamon bark, cloves, lemon peel, nutmegs, orange peel, peppermint herb, rose petals, sassafras bark, spearmint herb, wintergreen herb (and an identical oil from birch bark). There are also oils from the culinary herbs such as basil, marjoram, savory and thyme, which are sometimes used for flavoring extracts.

Now, in the official standards for the flavoring extracts directed to be made from these oils the strength ranges from 0.1% of oil directed in Sweet Basil Extract, to 5% of oil directed in the Extracts of Lemon and Orange, a range of from 1 to 50.

Of the flavoring extracts which are not made from the volatile oils, there may be mentioned ginger, which is made from the rhizome, commonly called the root; tonka, which is made from an odorous bean called by that name, and vanilla, which is made from the well known vanilla bean. While in all three of these a volatile oil is known to exist, the qualities of odor and flavor are communicated by other principles present in the plant. Thus, in ginger, the pungent resins are just as important as the volatile oil; in tonka there is an odorous crystalline principle called coumarin, and in vanilla there is an odorous crystalline principle called vanillin, as well as flavoring resins. In this class also belong those fruits, of which flavoring extracts are sometimes found, such as raspberry, strawberry, pineapple, banana, etc. When these extracts are actually derived from the fruit they consist in reality of concentrated fruit syrups, preserved with alcohol, and are very low in flavoring value as compared with the extracts made from the volatile oils.

The problem of labeling flavoring extracts is still further complicated by the fact that there are synthetic and artificial flavoring principles from which extracts may be made, which in contradistinction from the genuine extracts are usually labeled "imitation" or "substitute," or by some similar distinctive name. The word "artificial" in its true sense means made by art and an artificial product may answer the same purpose as the natural or genuine product and may resemble it closely, but it is not necessarily identical in a chemical sense. The word "synthetic," however, is from Greek words, meaning

to put together, and in its practical application a synthetic article is identical with the article of natural origin and is usually undistinguishable chemically. For example, oil of bitter almond is a natural product while benzaldehyde is the synthetic product corresponding to it. Oil of wintergreen and oil of birch are natural products, while methyl salicylate is the synthetic product having the same composition and properties. Coumarin and vanillin, the odorous crystalline principles of tonka and vanilla beans, respectively, are both made synthetically and the products are indistinguishable and interchangeable.

In flavoring extract manufacture, therefore, the synthetic products may be substituted for the natural with no difference in the resulting product and as such substitution is difficult or impossible to detect analytically, it is to the credit of most manufacturers that they designate such products as synthetic that are not of natural origin. In this connection, it may be stated that there is no loss to the consumer in the use of a synthetic product, for the articles are identical in every respect.

With regard to the use of artificial products the condition is slightly different. A flavoring extract of strawberry made up of the odorous bodies known as aromatic esters, may properly be termed artificial, for it is compounded by art and in a general way it resembles the product whose name it bears, but it is not chemically identical with the natural article and the word synthetic is not properly applied to such a product. The words "imitation" or "substitute" are more intelligible to the average purchaser, but the manufacturer uses these only when compelled to do so, for obvious reasons.

An increasing use of the words "imitation" and "substitute" is being found, applied to articles which are not really imitations or substitutes, but are in reality only substandard or weak preparations. In making flavoring extracts from the volatile oils, alcohol is used to dissolve the oils because they are insoluble in water. Some of the oils are only completely soluble in the very strong alcohol known as 190° proof or 95% alcohol. Any water added to such a preparation occasions a turbidity or cloudiness caused by the separation of minute drops of the oil. As the alcohol is the most expensive ingredient in many of these preparations, manufacturers were formerly in the habit of adding water to the extract and then filtering the preparation, usually with the agency of some filtering medium like magnesium carbonate, which ensured a bright sparkling preparation but one that was deficient in the volatile oil and consequently in flavoring value, some showing less than 10% of the oil originally added in making the preparation, the other 90% having been filtered out and thrown away. The preparation, of course, was reduced in flavoring effect

in a like ratio, but strangely enough, the consuming public, for many years, purchased such preparations for full strength articles without demur. Some manufacturers were ignorant of the fact that they were throwing away the major portion of the oil and were honest in their belief, that as the proper amount had been originally used in making the preparation they should not be held accountable for any losses occurring during the subsequent manipulation and filtration. Others, knowing the true condition of affairs, took advantage of their knowledge and added only a small proportion of oil in the first place, thus making a very cheap and comparatively worthless preparation, for which, however, a great demand was created because of larger bottle could be bought for a very small price.

After the advent of standards and laws, which prohibited the sale of such preparations under the name of a straight extracts, manufacturers resorted to the expedient of labeling such extracts "imitation" or "substitute." This practice, while theoretically indefensible, has been tolerated under both State and National laws, although it brings about this anomalous condition, that a straight lemon extract, for instance, containing 5% of oil, comes into direct competition with a product labeled "Imitation lemon extract" which usually sells for from one half to one third the price for the same amount, but in which the consumer gets only from one tenth to one twentieth the actual amount of flavor in the high grade article and which is not really an imitation extract but merely a diluted extract. There never was a line of goods in which the consumer needs more education than in flavoring extracts and it is always economy to pay the higher price for a standard article rather than to pay less for the imitation or substitute, except in the case of vanilla which, not being made for a volatile oil deserves special consideration and explanation later.

In the case of lemon and orange extracts, still another class of products has appeared upon the market. These are the terpeneless extracts, which do not contain the original oils but which contain the active flavoring principles of these oils, which it has been found possible to separate by certain processes. These extracts owe their trade popularity to the fact that the so called terpeneless oils from which they are made are soluble in weaker alcohol and the preparations can be made much more cheaply than the straight extracts, but although the strength may compare favorably in the better terpeneless extracts, with the straight extracts, these preparations usually lack the richness and quality of flavor of the high grade extracts made from the unmanipulated oils.

This tendency to make preparations of as low an alcoholic strength as possible has been contributed to by the fact that in prohibition localities flavoring extracts have been resorted to as a substitute for

the alcoholic liquors whisky, brandy, rum, gin, etc., and in some States rulings have been promulgated or laws have been passed, controlling or limiting the alcoholic strength of the flavoring extracts and placing restrictions around their sale. At one time the tendency to use the extracts for alcoholic stimulation was illustrated by the fact that many of the preparations, as peppermint, ginger and lemon, were put up in small flasks of a convenient size and shape for carrying in the pocket and in the case of ginger extract particularly, the article was often made of an alcoholic strength comparable to whisky, was deficient in ginger, and to make up for this deficiency, was reinforced with capsicum or red pepper to make it pungent and attractive to the dipsomaniacs who purchased and consumed it.

It is to the credit of the majority of the flavoring extract manufacturers that as soon as they realized the misuse of their products in this respect, they aided in every way to minimize such misuse. It is also a healthy sign of the times that the flavoring extract manufacturers have banded themselves together into State and national associations, which have for their object the guidance of their members into strict compliance with such laws, both State and Federal, as meet with their approval, for it must be remembered that in many States freak legislation sometimes makes it necessary for a manufacturer to use a label conforming to some specific and frequently unimportant requirement which, when literally complied with makes the same package illegal when offered for sale in the markets of an adjoining State. For instance, in Pennsylvania nothing is required in labeling except that the product shall conform to the standards of the article whose name it bears and no false or misleading statements shall appear upon the package, while in some of the States the alcoholic strength of the preparation must appear in a particular place upon the label and in type of a certain size; in others, a complete list of the ingredients and their percentages must also appear upon the main label. This latter requirement seems altogether unnecessary as it complicates and fills up the main label to such an extent as to prevent its being easily understood by the average purchaser to whom the names and percentages of constituents are either unimportant or meaningless. The national association of flavoring extract manufacturers, through bulletins sent out by expert legal and technical advisers have placed themselves on a very high plane as regards their attitude toward all reasonable laws providing for high class simply but intelligently labeled products and a member of that association, following the advice given in these official bulletins need never fear just prosecution under either State or Federal laws.

LIST OF SAMPLES

The following is a list of samples purchased for examination, together with a record of the statements upon the labels:

C. H. L. 12755. R. M. S. 11839. Raspberry Flavoring Extract. Bee brand, McCormick & Co., Baltimore, Md. On carton: B "Pure Raspberry Extract, 22% alcohol. Made only from choicest Mexican Bean, is aged to impart its delicious flavor. Absolute purity and highest quality." Label on bottle reads: "5½ drs. Teaspoon or more to a quart. Guaranteed under Food and Drugs Act. Serial No. 1417."

C. H. L. 12760. R. M. S. 11844. Vanilla Extract. Mnfd. by J. LeCroy & Son, 344 Kaighn Ave., Camden, N. J. On carton: "1 teaspoon or more to a pint as desired. This extract has the flavor of fresh ripe fruit. Guaranteed strictly pure." On label: "Concentrated Natural Fruit Extract of Vanilla."

C. H. L. 12761. R. M. S. 11845. Lemon Flavoring Extract. Made by LeCroy & Son, 344 Kaighn Ave., Camden, N. J. On carton: "Concentrated natural fruit Extract of Lemon. Guaranteed under the Food and Drugs Act. Serial No. 5502. 1 teaspoon to 1 pint of material."

C. H. L. 12764. R. M. S. 11847. Pure Extract of Vanilla. On carton: "1 teaspoon to 1 quart. Bottled for Orient Tea Importing Co. Orient brand."

C. H. L. 12765. R. M. S. 11848. Pure Extract of Lemon. Orient brand. On carton: "Liquid contents 2 oz. 1 teaspoon to 1 quart. Bottled for Orient Tea Importing Co."

C. H. L. 12769. W. E. S. 1328. Vanilla Extract. Quality brand.

C. H. L. 12770. W. E. S. 1329. Quality brand Pure Extract of Lemon. Prepared for Importers' Branch, Ltd., N. Y., Boston, Phila., London.

C. H. L. 12771. W. E. S. 1330. Benefit brand Pure Orange Extract. On carton: "Distributed by Direct Importing Co., Boston, Mass."

C. H. L. 12772. W. E. S. 1331. Pure Concentrated Extract Vanilla. Made by C. F. Sauer Co., Richmond, Va. "Flavor according to taste or 1 teaspoon to a pint. No color used. Made from best selected beans, cut loaf sugar and high grade spirits."

C. H. L. 12773. W. E. S. 1332. Pure Vanilla Extract. On carton: "Ingersoll's Select brand. Absolutely reliable. Mnfd. by Standard Extract Co., Phila., Pa. Capacity 6 drs."

C. H. L. 12774. W. E. S. 1333. Vanilla Extract. Heinle's Pure Chef brand. Contents 1 fl. oz. Mnfd. and guaranteed by the Chas. Heinle Specialty Co., Phila., Pa."

C. H. L. 12775. W. E. S. 1334. Vanilla Extract. Clawson's absolutely pure Flavoring Extract of Vanilla. Net contents 2 oz. Mufd. by The Clawson Co., Phila. "Use $\frac{1}{4}$ less of this vanilla than any other."

C. H. L. 12776. R. M. S. 11852. "True Fruit Pineapple Extract." Premier brand. Francis H. Leggett & Co., N. Y. Contents 2 liquid ounces."

C. H. L. 12777. R. M. S. "True Fruit Raspberry Extract." Premier brand. Guaranteed by the Francis H. Leggett Co., N. Y., under the Food and Drugs Act."

C. H. L. 12780. R. M. S. 11856. Extract of Wintergreen. Benefit brand. Distributed by Direct Importing Co., Boston, Mass. Guaranteed by Direct Importing Co., under the Food and Drugs Act. Serial No. 48255. Strictly pure.

C. H. L. 12783. R. M. S. 11859. Vanilla. Tartan brand. Alfred Lowry & Bro., Phila. Absolutely pure. Contents, 2 liquid oz. net.

C. H. L. 12789. W. E. S. 1335. Pure Extract Vanilla. Prepared and packed by the L. H. Parke Co., 232 Market St., Phila.

C. H. L. 12790. W. E. S. 1336. McCaffrey's Pure Flavoring Vanilla. "Contents 6 drs. Packed for J. A. McCaffrey & Sons, 4007 & 4009 Market St., Phila."

C. H. L. 12792. W. E. S. 1338. Knight's Extract of Vanilla. "Strictly pure. Guaranteed by the Knight Cooking Extract Co., under the Food and Drugs Act, Serial No. 7257." Mufd. by Knight Cooking Extract Co., 211 Arch St., Phila.

C. H. L. 12793. W. E. S. 1339. Extract of Lemon. Herald brand. "Contents 6 drs. Packed for Githens, Rexsamer & Co., Importers, Phila. Guaranteed pure and will comply with all pure food laws."

C. H. L. 12796. W. E. S. 1340. Pure Jamaica Ginger. "About 50% alcohol. Capacity, $\frac{1}{4}$ oz. Standard Extract Co., Phila."

C. H. L. 12797. W. E. S. 1341. Winston Extract of Orange. Mufd. by The Winston Extract Co., Phila. "Stronger, better and cheaper than any goods on the market. One half the quantity will do the flavoring of double the amount of other extracts. $\frac{1}{2}$ teaspoon to each quart."

C. H. L. 12798. W. E. S. 1342. True Fruit Raspberry Extract. Premier brand. Francis H. Leggett & Co., N. Y. Contents, 2 liquid ounces.

C. H. L. 12799. J. B. K. 2864. Extract of Vanilla. Acme brand. Distributed by Acme Tea Co., Phila. Contents, $1\frac{1}{2}$ fl. oz.

C. H. L. 12800. J. B. K. 2863. Extract Vanilla. Geo. W. Davy & Co., Druggists, 151 Main St., Coatesville, Pa.

C. H. L. W. E. S. 1343. Mayflower Extract Pure Vanilla. The A. Colburn Co., Phila.

C. H. L. 12805. W. E. S. 1344. Royal Crown Pure Extract Vanilla. Packed for Wm. King & Co., Phila. Guaranteed pure and will comply with all pure food laws.

C. H. L. 12809. W. E. S. 1347. McIntyre's Pure Extract of Vanilla. Wm. T. McIntyre & Co., Ardmore, Narberth, Overbrook. Guaranteed strictly pure. Serial No. 12102.

C. H. L. 12810. W. E. S. 1348. Extract of Vanilla. Roeder Drug Co., Green Lane & Silverwood St., Manyunk, Phila. Teaspoon or more to a quart.

C. H. L. 12811. W. E. S. 1349. Keystone Pure Extract of Vanilline. 1 teaspoon to a quart. Guaranteed under Food and Drugs Act. Guaranteed that the articles of foods and drugs sold, manufactured or distributed are according to U. S. P. and N. F. formulas. Keystone-Kookon Medicine Co., Horace K. Prentzel, Mngr., 420 N. 41st St., W. Phila. "This extract cannot be surpassed either in flavor, strength or purity. We consider this superior to extract made from vanilla bean."

C. H. L. 12812. W. E. S. 1350. Extract Vanilla. Serv-Us brand, High Grade Pure Extract of Vanilla. Serv-Us Pure Food Co., Distributors, N. Y. and Chicago. Serial No. 38251. Absolutely pure and full strength. Packed direct in this bottle from our germ proof vats.

C. H. L. 12813. 2883. Extract of Vanilla. Burnett's Superior Extract of Vanilla. Perfectly pure. Jos. Burnett Co., Boston, Mass. Guaranteed to comply with all pure food laws, State and National. Teaspoon to 1 quart.

C. H. L. 12815. R. M. S. 11870. Extract of Vanilla. Frank Mustaro, Pharmacy.

C. H. L. 12819. R. M. S. 11874. Nickel brand Vanilla Substitute. Mnfd. by The Clawson Co., 240 Chestnut Ct., Phila. "Artificially colored."

C. H. L. 12822. W. E. S. 1351. Pure Extract Vanilla. Puritan brand, Boyce Extract Co., Inc., N. Y.

C. H. L. 12824. W. E. S. 1353. Extract of Vanilla. Alfred Lowry & Bro., Phila.

C. H. L. 12826. W. E. S. 1355. Vanilla Compound. "Artificially colored. Pure vanilla bean in every bottle." Serial No. 46276. D. H. Brown, 1112 W. Marshall St., Norristown, Pa.

C. H. L. 12827. W. E. S. 1356. Extract Lemon. Miller's Extract of Lemon. Absolute purity, superior quality. 1 teaspoon to 1 quart material. From laboratories of The Miller Mnfg. Co., 185 Duane St., N. Y.

C. H. L. 12828. W. E. S. 1357. Essence of Orange. "Made from selected materials prepared by The Dill Medicine Co., Norristown, Pa. Serial No. 776.

C. H. L. 12829. W. E. S. 1358. Pure Extract Vanilla. Steelman & Archer brand. Serial No. 1028. Mnfd. by Steelman & Archer, Wholesale Druggists, Phila.

C. H. L. 12833. R. M. S. 11879. Pure Extract of Vanilla. Hansell's. Prepared by Wilnot, Hansell Mnfg. Chemist, Masonville, N. J. "Hansell's Concentrated Extract of Vanilla. Made from selected stock. Wilnot Hansell, Druggist and Chemist.

C. H. L. 12834. R. M. S. 11880. Pure Extract of Vanilla. Cedarbrook brand. Packed for Bernard Off & Sons, Phila. "Guaranteed absolutely pure and will comply with food laws."

C. H. L. 12835. R. M. S. 11881. Pure Extract Lemon. Cedarbrook brand. Packed for Bernard Off & Sons, Phila.

C. H. L. 12838. R. M. S. 11884. Essence of Vanilla. Baer & Snyder, Phila. "Compound" in small letters.

C. H. L. 12840. R. M. S. 11886. Extract Vanilla. Frank Mustaro, Farmacia.

C. H. L. 12847. W. E. S. Pure Extract of Lemon. "Our Choice" brand. Packed for H. K. Kindig & Co., Phila. Guaranteed pure.

C. H. L. 12848. W. E. S. 1354. Pure Extract Vanilla. W. and K. brand. Warner & Keen, Lansdale, Pa. Guaranteed strictly pure.

C. H. L. 12849. W. E. S. 1365. Pure Extract Lemon. J. Paul T. brand. Terpeneless. Conforms to F. and D. Act. Serial No. 12823. B. Trautman, 1920 E. Passyunk Ave., Phila.

C. H. L. 12851. R. M. S. 11888. Extract Lemon. Wild Rose brand. Word "Compound" stamped over word "Extract." Mnfd. by A. Colburn Co., 110 N. Second St., Phila.

C. H. L. 12853. R. M. S. 11889. Extract Vanela.

C. H. L. 12854. R. M. S. 11890. Extract Vanilla. Teaspoon to 1 qt. B. Roessner, 509 N. Second St., Phila. Deutsche Apotheke.

C. H. L. 12858. W. E. S. 1366. Vanilla Extract. Ingersoll's Select Brand. Ingersoll & Co., Phila. Serial No. 10601.

C. H. L. 12859. W. E. S. 1367. Pure Vanilla Extract. Adelphia brand. Prepared for Chester Market House.

C. H. L. 12860. W. E. S. 1368. Pure Extract of Vanilla. Laird's American brand. Serial No. 12102. Laird's, 421 Market St., Chester, Pa. Guaranteed strictly pure.

C. H. L. 12862. W. E. S. 1370. Extract of Lemon. Worth's Pure Flavoring Extract. Serial No. 2323. Worth Extract Co., N. Y.

C. H. L. 12863. W. E. S. 1371. Old Dominion Extract Lemon. "Terpeneless." Guaranteed by Interstate Commerce Co., Inc., Richmond, Va. Serial No. 32749. "I teaspoon to 1 pint."

C. H. L. 12866. J. B. K. 2937. Pure Orange Extract. Mayflower Extract. A. Colburn Co., Phila. Serial No. 327.

C. H. L. 12870. R. M. S. 11892. Extract Vanilla. Hires' Pure Non-Alcoholic Vanilla. Word "Alcoholic" written in. Prepared by Hires Co., Germantown, Pa. "Double concentrated extract."

C. H. L. 12871. R. M. S. 11892a. Pure Extract Vanilla.

C. H. L. 12872. R. M. S. 11893. Extract Vanilla. Ideal Vanilla. "Absolutely free from all adulterants." Made only by Snyder Extract Co., Germantown, Phila., also Weldon, Pa. Made by entirely new process.

C. H. L. 12873. R. M. S. 11894. Extract Vanilla. 1 teaspoon or more to 1 qt. E. W. Knille, Germantown Ave & Penn St., Phila., Druggist.

C. H. L. 12876. R. M. S. 11897. Extract Vanilla. Manheim brand. Packed for George C. Worthington & Co., 6100 Germantown Ave., Phila.

C. H. L. 12880. J. B. K. 2969. Extract Vanilla. Rosedale brand. "Strictly pure." Serial No. 3418. Mnfd. for Schwenk & Caldwell, 35 N. 3d St., Phila.

C. H. L. 12882. R. M. S. 11894aa. Extract Vanilla. Name on label "Chas. W. Watson"; Name of Richardson blown on bottle.

C. H. L. 12885. R. M. S. 11899. Con-bak Extract Vanilla. McCormick's. For confectioners' and bakers' use. Serial No. 1417. McCormick & Co.; Manufacturing Chemists, Baltimore, Md.

C. H. L. 12888. R. M. S. 11902. Extract of Vanilla. J. W. Neff, Druggist, 1015 Columbia Ave., Phila.

C. H. L. 12889. R. M. S. 11903. Extract Vanilla. W. J. Heim, Druggist, 10th & Jefferson Sts., Phila.

C. H. L. 12890. R. M. S. 11904. Extract Vanilla. P. Cantor, Druggist, 10th & Ogden Sts., Phila.

C. H. L. 12891. R. M. S. 11905. Extract Vanilla. $\frac{1}{2}$ teaspoon to 1 qt. Schor's Pharmacy, 7th & Brown Sts., Phila.

C. H. L. 12893. W. E. S. 1373. Extract of Vanilline. Hoyt's Blue Ribbon brand. 1 teaspoon to 1 qt. Mnfd. by Chas. R. Hoyt, 437 N. Salford St., Phila. "Will not bake out in baking."

C. H. L. 12894. W. E. S. 1374. Pure Extract Vanilla. Lincoln brand. Prepared for the Lincoln Tea Importing Co., 1016 W. Girard Ave., Phila.

C. H. L. 12896. W. E. S. 1376. Pure Extract Almond. Mayflower brand. The A. Colburn Co., Phila. Serial No. 327.

C. H. L. 12898. W. E. S. 1378. Extract Almond. "Pure concentrated natural fruit extract almond." Guaranteed by John Lecroy & Son. Serial No. 5502. John Lecroy & Son, 344 Kaighn Ave., Camden, N. J. 1 teaspoon to 1 pint.

C. H. L. 12899. W. E. S. 1379. Vanilla. 1 teaspoon to 1 qt. Serial No. 1006. A. J. Engle's Sons, Ogontz, Pa.

- C. H. L. 12900. W. E. S. 1380. Extract Vanilla. C. L. Comfort Co., 400 N. 3d St., Phila. Serial No. 594.
- C. H. L. 12902. J. B. K. 2981. Pure Extract Vanilla. Mountain City brand. Packed for Lippincott & Co., Phila., Altoona, Columbia.
- C. H. L. 12905. R. M. S. 11908. Vanilla Essence. Blumberg's Pharmacy, 729 S. 2nd St., Phila.
- C. H. L. 12906. R. M. S. 11909. Pure Extract of Vanilla. Frank J. Austin, druggist, 5th & Lombard Sts., Phila.
- C. H. L. 12912. R. M. S. 11910. Extract Vanilla. J. Robinson, Apothecary, 7th & Poplar Sts., Phila.
- C. H. L. 12913. R. M. S. 11911. Extract Vanilla. Stein's Pharmacy, 6th & Parrish Sts., Phila.
- C. H. L. 12914. R. M. S. 11912. Extract Vanilla. Finestone's Pharmacy, 5th & Fairmount Ave., Phila.
- C. H. L. 12915. R. M. S. 11913. Pure Extract Vanilla. Hanscom Bros., Phila. Serial No. 27854.
- C. H. L. 12917. J. B. K. 3005. Extract Vanilla. Sunbeam Pure Food brand. Austin, Nichols & Co., Inc., N. Y. Serial No. 188A. 1 teaspoon to 1 pint.
- C. H. L. 12918. W. E. S. 1382. Pure Almond Extract. Red Front brand. Mnf'd. by The Great Atlantic & Pacific Tea Co., Jersey City, N. J.
- C. H. L. 12919. W. E. S. 1383. Extract Vanilla. Sunbeam Pure Food brand. Austin, Nichols & Co., Inc., N. Y.
- C. H. L. 12920. W. E. S. 1384. Pure Extract of Lemon. Red Ribbon brand. Packed for Reeves, Parvin & Co., Phila.
- C. H. L. 12921. W. E. S. 1385. Extract Lemon. Gillett's Double Extract. Warranted pure. E. W. Gillet, Chicago, Ill.
- C. H. L. 12953. W. F. H. Extract of Vanilla. A. B. Heckerman, Druggist, Port Royal, Pa.
- C. H. L. 12954. W. F. H. 2032. Extract of Vanilla. Hallock Denton Co., Newark, N. J. Contents 6 drs.
- C. H. L. 12955. W. F. H. 2033. Pure Vanilla Extract. Rothrock's brand. Put up and guaranteed by The E. W. Rothrock Co., Tyrone, Pa. Serial No. 46747.
- C. H. L. 12956. W. F. H. 2034. Imitation Vanilla Flavor. E. F. Heefner, Mifflintown, Pa. "Artificially colored compound." Ingredients given on label. Guaranteed by The Styron-Beggs Co., Mfg. Chemists, Newark, Ohio.
- C. H. L. 12957. W. F. H. 2035. Vanilla. Un-Gro-Co brand. United Groceries Corporation, Toledo.

C. H. L. 12971. W. F. H. 2063. Vanilla Substitute. St. John's Flavors. Serial No. 2322. St. John & Co., Inc., N. Y. & Springfield, Mass.

C. H. L. 12972. W. F. H. 2062. Pure Vanilla Extract. Mnfd. and guaranteed by Stewart & Garberich, Jersey Shore, Pa.

C. H. L. 12973. W. F. H. 2064. Imitation Lemon. O. K. brand. Artificially colored. Compound of Citral from oil lemon, grain alcohol, water, artificial non-poisonous color, a trace. Mnfd. by the C. L. Cotton Perfume and Extract Co., Earlville, N. Y.

C. H. L. 12974. W. F. H. 2065. Pure Extract of Vanilla. The Dill Medicine Co., Norristown, Pa. Serial No. 776.

C. H. L. 12975. W. F. H. 2066. Extract of Lemon, Clover brand. "Absolutely pure. 78% alcohol." McCormick & Co., Mnfg. Chemists, Baltimore, U. S. A. Teaspoon or over to 1 quart.

C. H. L. 12976. W. F. H. 2167. Vanilla. "Ten cent Vanilla. Coumarin, Vanillin. Use $\frac{3}{4}$ the quantity you have been using. Serial No. 23645." G. R. Ryan Mnfg. Co.

C. H. L. 12977. W. F. H. 2068. Imitation Vanilla Flavoring. Elk brand. Caramel color. Ingredients given on label. Mnfd. by Clotworthy Chem. Co., Baltimore, Md.

C. H. L. 12978. W. F. H. 2069. Crescent Mapleine. Made by Crescent Mnfg. Co., Seattle, Wash. "Contains no maple sugar nor sap, but produces a taste similar to maple."

C. H. L. 12979. W. F. H. 2070. Raspberry Extract. Joseph Burnett Co., Boston, Mass.

C. H. L. 12980. W. F. H. 2071. Compounded Vanilla Flavoring. Robert W. Madeira, Druggist, Reading, Pa. Artificially colored. Ingredients given on label.

C. H. L. 12981. W. F. H. 2072. Pure Extract of Lemon. Guaranteed by R. W. Madeira, Druggist, Reading, Pa. "Alcohol 65%."

C. H. L. 12982. W. F. H. 2074. Pure Extract of Vanilla. Packed for the Mohican Co., N. Y. "Quality attested."

C. H. L. 12983. W. F. H. 2075. Pure Extract Almond. Mnfd. by C. F. Sauer Co., Richmond, Va.

C. H. L. 12984. W. F. H. 2076. Birch Wintergreen Flavoring. The Great Atlantic & Pacific Tea Co., Jersey City.

C. H. L. 12985. W. F. H. 2078. W. S. Potteiger, Reading, Pa. "Artificially colored." Ingredients given on label.

C. H. L. 12986. W. F. H. 2081. Extract of Vanilla. The Miller Mnfg. Co., N. Y. "Superior strength and quality."

C. H. L. 12987. W. F. H. 2083. Lemon Substitute. Nickel brand. Mnfd. by The Clawson Co., Phila. "Artificially colored" in small letters. "Substitute" in shaded letters.

C. H. L. 12988. W. F. H. 2085. Compound Extract of Vanilla. D. Dickinson Medicine Co., Reading, Pa. Contains "Vanillin, coumarin, alcohol, caramel."

C. H. L. 12989. W. F. H. 2086. Essence of Jamaica Ginger. Guaranteed by Harold Guenther, druggist, Reading, Pa. Labeled "For medicinal purposes."

C. H. L. 13009. W. F. H. 2088. Artificial Extract of Vanilla. "Artificial extract" in very small type. Bowman Bros. Drug Co., Canton, O. Ingredients given on label.

C. H. L. 13010. W. F. H. 2089. Vanilla Extract. F. E. Harris Co., Binghamton, N. Y. "Pure Extract." "Alcohol 40%."

C. H. L. 13011. W. F. H. 2090. Pure Almond Extract. Mother's brand. Pittsburgh Food Products Co., Pittsburgh, Pa. "Our strongest and most concentrated products."

C. H. L. 13012. W. F. H. 2091. Lemon Extract. George Hubbard & Co., Pittsburgh, Pa. On carton: "One half strength." On label: "3-5 strength." Gold standard brand. Ingredients given on label.

C. H. L. 13013. W. F. H. 2092. Extract of Lemon. E. Schmidt & Co., Baltimore, Md. "Artificially colored, highly concentrated."

C. H. L. 13014. W. F. H. 2093. Lemon Flavoring Extract. "Shugo Special." Schueter & Gormley, Jeannette, Pa. "Artificially colored. 2-5 strength."

C. H. L. 13015. W. F. H. 2094. Pure Extract of Vanilla. Dove brand. The Frank Tea & Spice Co., Cincinnati, O. "Contents, $\frac{3}{4}$ fl. oz. 35% alcohol."

C. H. L. 13016. W. F. H. 2095. Extract of Lemon, Boerner Fay Co., Iowa City, Iowa. "Much stronger than lemon extracts usually sold."

C. H. L. 13017. W. F. H. Essence of Wintergreen. The Dill Medicine Co., Norristown, Pa. "Prepared from select materials."

C. H. L. 13018. W. F. H. 2098. Compound Vanilla Flavoring. National Mustard Co., West Newtown, Pa. "Caramel color." Ingredients given on label.

C. H. L. 13019. W. F. H. 2099. Pure Extract of Orange. Packed for B. H. Voskamp's Sons, Pittsburgh, Pa. 6 drs.

C. H. L. 13020. W. F. H. 2100. Extract of Vanilla. Arbuckle brand. Mnfd. by Arbuckle Bros., Chicago.

C. H. L. 13021. W. F. H. 2101. Pure Lemon Extract. P. H. Butler Co., Pittsburgh, Pa.

C. H. L. 13022. W. F. H. 2102. Pure Extract of Vanilla. Tweed & Botsford, Pittsburgh, Pa.

C. H. L. 13023. W. F. H. 2103. Extract of Vanilla and Tonka Compound. W. J. Gilmore Drug Co., Pittsburgh, Pa.

C. H. L. 13024. W. F. H. 2104. Celery Extract. Distributed by Sprague, Warner & Co., Chicago, Ill. Ferndell brand. "2 ounces, 80% alcohol."

C. H. L. 13025. W. F. H. 2105. Extract of Lemon, Royal brand. Packed for D. C. Shaw & Co., Pittsburgh, Pa.

C. H. L. 13026. W. F. H. 2106. "Panner's Extract of Vanillin, Coumarin and Substitute for Vanilla." Mnfd. by Panner Mnfg. Co., Pittsburgh, Pa. "Colored with caramel."

C. H. L. 13027. W. F. H. 2107. Extract of Vanilla. "Our Judge brand Absolutely Pure Extract of Vanilla." Packed for Johnson, Earl, Myers Co., Pittsburgh, Pa.

C. H. L. 13028. W. F. H. 2108. Cotton's Pure Vanilla. Mnfd. by C. L. Cotton Perfume & Extract Co., Earleville, N. Y. "Superior Extract Vanilla."

C. H. L. 13029. W. F. H. 2109. Grand Union Extract of Wintergreen. Grand Union Tea Co., Brooklyn, N. Y. Alcohol content not stated. "Notice: The contents of this package are pure and full government strength, but is sold for culinary purposes only and not offered for medicinal use."

C. H. L. 13030. W. F. H. 2110. Grand Union Extract of Almond. Mnfd. by Grand Union Tea Co., Brooklyn, N. Y. "Alcohol 43%."

C. H. L. 13031. W. F. H. 2111. Extract of Vanilla. Zipp Mnfg. Co., Cleveland, Ohio.

C. H. L. 13032. W. F. H. 2112. Extract of True Vanilla. (Dr. Price's). Mnfd. by Price Flavoring Extract Co., Chicago, Ill. "Natural fruit flavor from the finest Mexican bean."

C. H. L. 13033. W. F. H. 2113. Panner's Terpeneless Lemon Extract. Panner Mnfg. Co., Pittsburgh, Pa. Alcohol content not stated.

C. H. L. 13034. W. F. H. 2114. Sovereign Pure Wintergreen Extract. Mnfd. by The Union Pacific Tea Co., N. Y.

C. H. L. 13035. W. F. H. 2115. Ladie's Favorite Vanilla Substitute. Heller & Perrin, Distributors, Pittsburgh, Pa. "Compound of vanillin, coumarin, sugar, water, alcohol. Colored with harmless sugar color."

C. H. L. 13036. W. F. H. 2117. Rogers' Vanilla. "Unrivalled in delicacy."

C. H. L. 13037. W. F. H. 2116. Blue Ribbon Pure Vanilla Extract. Wabash Baking Powder Co., Wabash, Ind. "Our best vanilla."

C. H. L. 13060. W. F. H. 2123. Colgate's Vanilla Extract. Colgate & Co., N. Y. "60% ethyl alcohol. Absolute purity guaranteed."

C. H. L. 13061. W. F. H. 2124. Knight's Extract of Almond. Mnfd. by the Knight Cooking Extract Co., 211 Arch St., Phila. "Double concentrated."

C. H. L. 13062. W. F. H. 2125. Keller's Extract of Vanilla. Prepared by Carr, Owens & Co., Baltimore, Md. "Alcohol 40%. Full strength."

C. H. L. 13068. W. F. H. 2130. Mutual Compound Extract of Orange. (Compound in very small letters.) Mutual Mnfg. Co., Canton, Ohio. Ingredients given on label.

C. H. L. 13067. W. F. H. 2131. Pure Lemon. Havana Extract Co., Montour Falls, N. Y. Arm and Hammer brand. Serial No. 12854. "Artificial harmless color."

C. H. L. 13089. W. F. H. 2145. Vanilla Substitute. Clark, Chapin & Bushnell, N. Y. Greenwich brand.

C. H. L. 13090. W. F. H. 2146. Pure Family Lemon. Simons Mnfg. Co., Binghamton, N. Y.

C. H. L. 13091. W. F. H. 2147. Extract of Orange. Calto brand. Johnstown Chem. Co., Johnstown, Pa.

C. H. L. 13092. W. F. H. 2148. Pure Extract Vanilla. Westmount brand. Put up for G. G. Pyle, Johnstown, Pa.

C. H. L. 13093. W. F. H. 2149. Extract of Lemon. W. H. Crawford & Co., Baltimore, Md. 90% alcohol.

C. H. L. 13094. W. F. H. 2150. Compound Flavoring of Terpeneless Lemon and Citral, colored. Arbuckle Bros., Chicago, Ill.

C. H. L. 13103. W. F. H. 2137. Extract of Terpeneless Lemon. "A. G. S. Best quality." American Grocers' Society, Newark, N. J.

C. H. L. 13104. W. F. H. 2138. Compound Flavor of Vanillin and Vanilla. Kent Drug Co., Baltimore, Md. Eagle brand. "Alcohol not over 26%. Colored with caromel."

C. H. L. 13105. W. F. H. 2139. Extract of Vanilla. "Seely's Pure True Best Quality." Seely, Detroit.

C. H. L. 13106. W. F. H. 2141. Vanilla, Strictly Pure. Orchard brand. Clark, Chapin & Bushnell, N. Y.

C. H. L. 13107. W. F. H. 2151. Extract of Vanilla. Pure Concentrated. Yough Chemical Co., Connellsville, Pa.

C. H. L. 13108. W. F. H. 2152. Almond Flavor. "Peerco." The Peerless Specialty Mnfg. Co., Connellsville, Pa. "Imitation" in small type.

C. H. L. 13109. W. F. H. 2153. Essence of Wintergreen. True Fruit brand. "75% alcohol with added vegetable color." Hungerford Smith Co., Rochester, N. Y.

C. H. L. 13111. W. F. H. 2154. Vanilla Flavor ("Compound" in very small print.) Kitchen Queen brand. Bauman Mnfg. Co., New Castle, Pa.

C. H. L. 13112. W. F. H. 2155. Vanilla, Vanillin and Coumarin Flavor. Magnolia brand. Ingredients given on label. The Wm. Edwards Co., Cleveland, Ohio.

C. H. L. 13113. W. F. H. 2156. Extract of Orange. Royal Crown brand. Packed for Wm. Weisbrod, Fancy Grocers' Supplies, Pittsburgh, Pa.

C. H. L. 13114. W. F. H. Extract of Lemon ("Souders"). Royal Remedy & Extract Co., Dayton, O. "No superior for strength and purity."

C. H. L. 13115. W. F. H. 2158. Extract of Vanilla. Mascot brand. The Eldridge & Higgins Co., Ohio.

C. H. L. 13116. W. F. H. 2159. Extract of Lemon. "High grade, Extra quality." The Weideman Co., Cleveland, O.

C. H. L. 13117. W. F. H. 2160. Vanillin Compound. Onward brand. Ingredients given on label. J. H. Fitch Co., Youngstown, Ohio.

C. H. L. 13118. W. F. H. 2161. Vanilla Extract. Pecul brand. C. T. Slade Co., Buffalo, N. Y.

C. H. L. 13119. W. F. H. 2162. Wintergreen Extract. "60%-94% alcohol." A. D. Mann Co., Syracuse, N. Y.

C. H. L. 13120. W. F. H. 2163. Extract of Lemon. "Alcohol 50%." Guaranteed to be the best. The Bowman Bros. Drug Co., Canton, O.

C. H. L. 13121. W. F. H. 2164. Extract of Vanilla. Blystone brand. C. Blystone, Meadville, Pa., Distributor.

C. H. L. 13122. W. F. H. 2165. Pure Vanilla. The Miller Eberhard Co., Cleveland, O.

C. H. L. 13123. W. F. H. 2166. Essence of Almond. "This essence is pure from chemically pure synthetic oil in 80 proof alcohol and blended with turmeric spice."

C. H. L. 13124. W. F. H. 2167. Extract of Lemon. Mohican brand. Packed for the Mohican Co., U. S. A. (Erie, Pa.)

C. H. L. 13125. W. F. H. 2169. Orange Flavor, Colton's. J. W. Colton Co., Springfield, Mass.

C. H. L. 13126. W. F. H. 2170. Extract of Vanilla, colored with caramel. C. S. and W. A. Keeler, Jamestown, N. Y.

C. H. L. 13127. W. F. H. 2171. Vanilla. Highly concentrated; free from injurious color. Red Monogram brand. S. Mills Ely Co., Binghamton, N. Y.

C. H. L. 13128. W. F. H. 2172. Extract of Vanilla. Pocono brand. 45% alcohol. Globe Grocery Stores, Inc., N. Y. City.

C. H. L. 13153. W. F. H. 2191. Extract of Lemon. "Imitation" in smaller type. Mnfd. by The People's Tea Co., Ltd., 42 W. Main St., Wilkes-Barre, Pa.

C. H. L. 13154. W. F. H. 2192. Extract of Lemon. "Rich, intense, strong." Distributed by J. S. Gillis, 57-59 S. Main St., Wilkes-Barre, Pa.

C. H. L. 13155. W. F. H. 2193. Extract of Vanilla. Double Star. Leader Mnfg. Co., Wilkes-Barre, Pa.

C. H. L. 13156. W. F. H. 2194. Extract of Wintergreen. Pocono brand. Globe Grocery Stores, Inc., N. Y. City.

C. H. L. 13157. W. F. H. 2195. Extract of Vanilla, San Toy brand. Mnfd. for Clark Stores by F. E. Harris Co., Binghamton, N. Y.

C. H. L. 13158. W. F. H. 2196. Vanilla. Superior grade. Mnfd. by S. L. Stanton & Son, 1644 Wyoming Ave., Scranton, Pa.

C. H. L. 13159. W. F. H. 2197. Imitation Vanilla Flavor, artificially colored. Daisy brand. "Imitation" on carton; not on bottle. "A compound made from vanilla beans, vanillin, cologne spirits, syrup and water." Smith & Foster, Scranton, Pa.

C. H. L. 13160. W. F. H. 2198. Pure Vanilla. Arbutus brand. Packed for J. T. Porter Co., 26 & 28 Lackawanna Ave., Scranton, Pa.

C. H. L. 13161. W. F. H. 2199. Orange Flavoring. Kresco brand. "Double strength, use half quantity." Kresco Chemical Co., Scranton, Pa.

C. H. L. 13162. W. F. H. 2200. Pure Terpeneless Lemon. Ingersoll and Co., Philadelphia.

C. H. L. 13163. W. F. H. 2201. Extract of Vanilla. Warfield brand. Seeman Bros., N. Y.

C. H. L. 13164. W. F. H. 2202. Extract of Lemon. Reliable brand. Mnfd. for E. C. Rafferty, Pa., 3d & Ferry Sts., Easton, Pa.

C. H. L. 13165. W. F. H. 2203. Terpeneless Lemon Extract. Empire State brand. "Diluted." "Artificially colored. About $\frac{1}{4}$ standard strength." Mnfg.'s name not given.

C. H. L. 13188. W. F. H. Lemon Extract. Elite brand. Hazleton Extract Co., Hazleton, Pa.

C. H. L. 13189. W. F. H. 2205. Essence of Lemon. Mnfd. by Barr's Pharmacy, Pinegrove, Pa.

C. H. L. 13190. W. F. H. 2206. Extract of Vanilla. "Concentrated fruit." On label "Compound." Mnfd. by Geo. A. Moss, New York. Ingredients on label.

C. H. L. 13202. W. F. H. Extract of Terpeneless Lemon. Tiger Head brand. Mnfd. by E. J. Gillies & Co., 245-249 Washington St., N. Y.

C. H. L. 13206. W. F. H. 2208. Lemon Flavor. S. M. G. Wenck & Son, Manufacturing Pharmacists, Northumberland, Pa.

C. H. L. 13250. Sauer's Pure Extract of Lemon. C. F. Sauer Co., Richmond, Va.

C. H. L. 13251. Sauer's Pure Concentrated Extract of Vanilla. C. F. Sauer Co., Richmond, Va.

C. H. L. 13298. W. F. H. 2217. Imitation Lemon. Blackman, Russell Co., Bedford, Pa.

C. H. L. 13299. W. F. H. 2218. Pure Extract of Lemon. Gilbert Bros. & Co., Baltimore.

C. H. L. 13300. W. F. H. 2219. Pure Extract of Almonds. Wm. Smith & Co., York, Pa.

C. H. L. 13301. R. M. S. 12039. Vanilla Flavored Concentrated Saccharin Solution.

C. H. L. 13306. W. F. H. 2220. Pure Extract Peach. Boyce Extract Co., 15 Jay St., N. Y.

C. H. L. 13307. W. F. H. 2221. Lemon Flavor, Artificially colored. The Sunbury Chem. Mnfg. Co., Sunbury, Pa.

C. H. L. 13308. W. F. H. 2222. Pure Extract of Lemon. Baker Extract Co., Springfield, Mass.

C. H. L. 13309. W. F. H. 2223. Essence of Orange. Dale & Co., Druggists, York, Pa.

C. H. L. 13310. W. F. H. 2224. Extract of Vanillin and Coumarin. "Extra strong." Prepared by Eclipse Chem. Co., 426 E. Market St., York, Pa.

C. H. L. 13311. W. F. H. 2225. Substitute Vanilla Flavoring. "Extra strong." Prepared by I. U. Boyd, York, Pa.

C. H. L. 13312. W. F. H. 2226. Extract of Vanilla. "Highly concentrated." Van Duzen Extract Co., N. Y.

C. H. L. 13313. W. F. H. 2227. Pure Bitter Almond Extract. "None better." R. Make brand. R. Make Co., York, Pa.

C. H. L. 13314. W. F. H. 2228. Pure Extract of Lemon. S. H. N. Shearer Co., Druggists, 16 N. George St., York, Pa.

C. H. L. 13321. W. F. H. 2230. Vanilla Substitute, St. John's brand. Ingredients on label. St. John & Co., New York.

C. H. L. 13322. W. F. H. 2231. Vanilla and Coumarin Flavoring. Dauphin Remedy Co., 125 Conoy St., Harrisburg, Pa.

C. H. L. 13343. W. F. H. 2223. Compound Lemon Flavor. Greater New York Extract Co.

The following data were obtained in the examination of the foregoing samples, to serve for the determination as to whether the samples were in compliance with the standards or the claims made upon the labels where deviation from the standard occurred:

TABULATION OF VANILLA EXTRACTS.

Chemist's No.	Residue. %	Ash. %	Alcohol. %	Vanillin. %	Couamrin. %	Color.	Lead No.
12760, ...	19.94	0.34	48.16	0.22	None	Natural	0.58
12764, ...	20.50	0.34	31.72	0.13	None	Natural	0.36
12769, ...	22.88	0.28	31.36	0.24	None	Natural	0.54
12772, ...	19.14	0.34	38.98	0.17	None	Natural	0.68
12773, ...	12.48	0.10	36.50	0.10	None	Natural	0.28
12774, ...	20.56	0.16	37.36	0.12	None	Natural	0.24
12775, ...	23.32	0.20	38.78	0.22	None	Natural	0.40
12783, ...	7.20	0.25	41.04	0.15	None	Natural	0.36
12789, ...	23.66	0.30	34.74	0.19	None	Natural	0.82
12790, ...	29.44	0.40	30.24	0.18	None	Natural	0.70
12792, ...	20.61	0.33	52.62	0.18	None	Natural	0.33
12799, ...	22.34	0.36	37.92	0.23	None	Natural	0.48
12800, ...	8.64	0.34	41.60	0.11	None	Natural	0.28
12804, ...	30.50	0.74	30.80	0.20	None	Natural	0.70
12805, ...	25.52	0.39	31.92	0.10	None	Natural	0.44
12809, ...	11.80	0.36	40.12	0.17	None	Natural	0.50
12810, ...	28.12	0.25	32.30	0.12	None	Natural	0.42
12811, ...	19.18	0.10	20.94	0.57	None	Caramel	None
12812, ...	21.96	0.16	41.78	0.16	None	Natural	0.38
12813, ...	9.24	0.32	38.56	0.19	None	Natural	0.60
12815, ...	20.75	0.04	36.28	0.10	None	Caramel	None
12819, ...	17.42	0.08	11.42	0.30	None	Caramel	None
12822, ...	10.76	0.24	40.12	0.14	None	Natural	0.28
12824, ...	6.58	0.20	36.72	0.13	None	Natural	0.32
12826, ...	1.34	0.04	10.00	0.60	None	Caramel	0.02
12829, ...	22.00	0.50	41.60	0.09	None	Natural	0.56
12832, ...	12.32	0.36	40.66	0.11	None	Natural	0.30
12834, ...	27.26	0.38	32.86	0.26	None	Natural	0.74
12838, ...	24.62	0.54	34.24	0.13	None	Natural	0.22
12840, ...	20.74	0.04	36.28	0.10	None	Caramel	None
12848, ...	7.88	0.34	38.16	0.13	None	Natural	0.46
12853, ...	23.32	0.60	52.44	0.20	None	Natural	0.54
12854, ...	21.01	0.37	55.90	0.16	None	Natural	0.24
12858, ...	24.90	0.35	37.36	0.16	None	Natural	0.70
12859, ...	12.66	0.34	38.76	0.12	None	Natural	0.50
12860, ...	9.40	0.14	25.18	0.27	None	Natural	0.32
12870, ...	24.42	0.54	42.58	0.22	None	Natural	0.52
12871, ...	23.72	0.46	37.16	0.16	None	Natural	0.44
12872, ...	23.46	0.92	36.28	0.18	None	Natural	0.52
12873, ...	23.78	0.58	36.06	0.18	None	Natural	0.58
12876, ...	33.50	0.50	31.16	0.27	None	Natural	0.78
12880, ...	23.82	0.33	31.72	0.21	None	Natural	0.44
12882, ...	5.62	0.20	50.34	0.14	None	Natural	0.70
12885, ...	16.48	0.46	41.41	0.20	None	Natural	0.08
12888, ...	8.86	0.02	16.54	0.77	None	Caramel	0.14
12889, ...	21.10	0.38	37.76	0.18	None	Natural	0.36
12890, ...	16.83	0.79	50.50	0.43	None	Natural	1.08
12891, ...	24.60	0.66	52.98	0.21	None	Natural	0.66
12893, ...	13.96	0.04	23.92	0.71	None	Caramel	None
12894, ...	27.97	0.32	31.72	0.27	None	Natural	0.52
12899, ...	34.80	0.46	35.84	0.17	None	Natural	0.62
12900, ...	18.32	0.38	31.92	0.24	None	Natural	0.46
12902, ...	24.84	0.44	31.16	0.22	None	Natural	0.50
12905, ...	33.14	0.44	37.16	0.16	None	Natural	0.60
12906, ...	26.23	0.19	34.96	0.12	None	Natural	0.36
12912, ...	27.88	0.30	33.22	0.19	None	Natural	0.34
12913, ...	21.69	0.04	17.26	0.46	None	Vegetable red	None
12914, ...	25.36	0.68	32.86	0.17	None	Natural	0.50
12915, ...	8.20	0.33	41.04	0.16	None	Natural	0.44
12917, ...	19.92	0.44	44.18	0.14	None	Natural	0.44
12919, ...	19.38	0.44	44.36	0.13	None	Natural	0.52
12953, ...	21.30	0.35	53.54	0.16	None	Natural	0.54
12954, ...	13.93	0.47	41.78	0.19	None	Natural	0.44
12955, ...	11.44	0.48	57.36	0.19	None	Natural	0.54
12956, ...	28.22	None	5.44	0.28	0.10	Caramel	0.12
12957, ...	15.90	0.32	36.96	0.19	None	Natural	0.56
12971, ...	13.76	None	1.86	0.35	0.03	Caramel	0.12
12972, ...	7.26	0.30	30.60	0.23	None	Natural	0.56
12974, ...	5.29	0.41	43.58	0.24	None	Natural	0.82
12976, ...	7.92	0.04	2.98	0.36	0.10	Caramel	0.10
12977, ...	14.99	0.15	19.24	0.46	0.05	Caramel	0.24
12980, ...	36.57	0.20	14.96	0.12	0.05	Caramel	0.16
12982, ...	4.51	0.30	33.60	0.12	None	Natural	0.40

TABULATION OF VANILLA EXTRACTS—Continued.

Chemist's No.	Residue. %	Ash. %	Alcohol. %	Vanillin. %	Coumarin %	Color.	Lead No.
12985, ...	13.25	0.04	3.14	0.17	0.05	Caramel	0.06
12988, ...	31.88	0.10	12.04	0.53	0.06	Caramel	0.26
13009, ...	15.62	0.08	12.80	0.75	0.09	Caramel	None
13010, ...	22.46	0.17	33.78	0.13	None	Natural	0.28
13015, ...	20.44	0.32	40.12	0.17	None	Natural	0.54
13018, ...	25.92	0.11	13.26	0.28	0.05	Caramel	0.14
13020, ...	15.66	0.51	32.86	0.20	None	Natural	0.54
13022, ...	8.66	0.29	35.40	0.16	None	Natural	0.38
13023, ...	21.55	0.16	36.06	0.04	0.02	Caramel	0.24
13026, ...	20.14	0.10	6.70	0.56	0.07	Caramel	0.14
13027, ...	17.24	0.40	33.60	0.12	None	Natural	0.40
13028, ...	14.22	0.33	46.36	0.18	None	Natural	0.40
13031, ...	16.75	0.38	31.96	0.08	None	Natural	0.42
13032, ...	15.93	0.39	42.18	0.23	None	Natural	0.56
13035, ...	14.56	0.04	2.12	0.18	0.02	Caramel	0.38
13036, ...	2.10	0.25	54.26	0.18	None	Natural	0.32
13037, ...	13.28	0.32	33.56	0.17	None	Natural	0.40
13060, ...	14.75	0.29	52.26	0.25	None	Natural	0.50
13062, ...	14.62	0.52	36.96	0.25	None	Natural	0.31
13080, ...	24.36	0.12	9.70	0.27	0.12	Caramel	0.14
13092, ...	21.77	0.48	33.96	0.13	None	Natural	0.66
13104, ...	21.56	0.06	21.12	0.70	None	Caramel	0.14
13105, ...	6.47	0.34	30.04	0.20	None	Natural	0.18
13106, ...	22.36	0.34	40.86	0.16	None	Natural	0.53
13107, ...	16.83	0.49	30.42	0.26	None	Natural	0.20
13111, ...	18.88	0.04	17.26	0.29	0.06	Caramel	0.16
13112, ...	5.67	0.20	17.44	0.28	0.08	Caramel	0.38
13115, ...	20.34	0.56	40.66	0.20	None	Natural	0.74
13117, ...	9.16	0.11	20.06	0.14	0.06	Caramel	0.14
13118, ...	26.19	0.42	31.74	0.23	None	Natural	0.72
13121, ...	18.82	0.44	43.18	0.27	None	Natural	0.60
13122, ...	14.65	0.43	24.80	0.12	None	Natural	0.60
13126, ...	11.14	0.24	37.56	0.16	None	Caramel	0.28
13127, ...	15.43	0.36	38.16	0.17	None	Natural	0.36
13128, ...	16.01	0.54	41.50	0.24	None	Natural	0.66
13155, ...	13.67	0.29	33.22	0.22	None	Natural	0.30
13157, ...	13.21	0.31	33.04	0.13	None	Natural	0.56
13158, ...	35.07	0.52	36.06	0.20	None	Natural	0.58
13159, ...	19.05	0.14	7.80	0.40	0.05	Caramel	None
13160, ...	19.48	0.28	54.08	0.20	None	Natural	0.64
13163, ...	22.26	0.44	36.28	0.21	None	Natural	0.60
13190, ...	6.08	0.04	16.20	0.08	None	Natural	0.40
13251, ...	9.10	0.55	38.90	0.25	None	Natural	0.70
13310, ...	12.60	0.02	9.70	0.55	0.16	Natural	
13311, ...	9.62	0.02	9.70	0.42	0.02	Natural	
13312, ...	13.78	0.42	46.02	0.18	None	Natural	0.62
13321, ...	13.92	0.34	13.10	0.06	0.05	Caramel	0.38
13322, ...	14.68	0.14	13.72	0.20	0.03	Caramel	0.22

TABULATION OF LEMON EXTRACTS.

Chemist's No.	Volatile oil. %	Alcohol. %	Color.
12761, ...	6.40	74.04	O. K.
12765, ...	5.29	71.78	O. K.
12770, ...	5.28	84.68	O. K.
12793, ...	5.13	76.66	O. K.
12827, ...	5.8	81.30	O. K.
12835, ...	5.2	83.20	O. K.
12847, ...	5.61	81.90	O. K.
12849, ...	0.28	47.76	O. K.
12851, ...	Traces	38.86	O. K.
12862, ...	5.9	76.50	O. K.
12863, ...	None	26.68	O. K.
12920, ...	5.53	72.64	O. K.
12921, ...	5	Wood alcohol	O. K.
12973, ...	None	33.40	Coal tar
12975, ...	5.26	74.54	O. K.
12981, ...	2.23	77.06	O. K.
12987, ...	None	24.62	O. K.
13012, ...	2.94	68.66	O. K.
13013, ...	5.6	81.46	Turmeric
13014, ...	1.90	83.90	Coal tar
13016, ...	5.4	83.16	Azo coal tar
13021, ...	5.78	86.88	O. K.
13025, ...	5.60	82.64	O. K.
13033, ...	None	47.56	O. K.
13069, ...	0.28	40.30	O. K.
13090, ...	Trace	50.94	Coal tar
13093, ...	6	81.48	O. K.
13094, ...	None	44.18	O. K.
13103, ...	None	47.36	O. K.
13114, ...	5.00	79.40	O. K.
13116, ...	5.10	85.90	O. K.
13120, ...	None	45.46	O. K.
13124, ...	6	74.16	Trace
13153, ...	None	33.36	Coal tar
13154, ...	2.40	71.16	Trace
13162, ...	None	43.58	Trace
13164, ...	5.20	76.22	Trace
13165, ...	None	34.34	O. K.
13188, ...	2.00	88	O. K.
13189, ...	2.40	87.12	Turmeric
13202, ...	None	53.72	O. K.
13206, ...	3.20	82.10	O. K.
13250, ...	10	82.16	O. K.

TABULATION OF ORANGE EXTRACTS.

Chemist's No.	Volatile oil. %	Alcohol. %	Color.
12771, ...	5.20	79.48	O. K.
12797, ...	4.00	83.58	Turmeric
12828, ...	4.6	85.11	O. K.
12866, ...	5.6	84.46	O. K.
13019, ...	5.76	86.76	O. K.
13068, ...	Trace	45.10	O. K.
13091, ...	8.00	80.68	O. K.
13113, ...	4.90	83.38	O. K.
13125, ...	7.20	78.50	None
13161, ...	3.20	80.28	Trace

TABULATION OF ALMOND EXTRACTS.

Chemist's No.	Volatile oil. %	Alcohol. %	Color.
	(benzaldehyde)		
12896, ...	1.03	47.45	O. K.
12898, ...	1.38	60.97	O. K.
12918, ...	1.30	41.78	O. K.
12983, ...	1.20	33.15	O. K.
13011, ...	2.30	48.05	O. K.
13030, ...	1.28	43.63	O. K.
13061, ...	0.81	83.07	O. K.
13108, ...	1.44	42.06	O. K.
13125, ...	0.60	49.29	Turneric
13300, ...	0.86	45.84	O. K.
13313, ...	1.64	68.94	O. K.

TABULATION OF WINTERGREEN EXTRACTS.

Chemist's No.	Volatile oil. %	Alcohol. %	Color.
12780, ...	2.74	55.18	O. K.
12984, ...	2.61	73.30	O. K.
13017, ...	4.91	84.62	O. K.
13029, ...	3.50	58.62	O. K.
13034, ...	3.72	65.80	O. K.
13109, ...	4.91	68.23	Vegetable red
13119, ...	3.26	61.80	O. K.
13166, ...	3.26	59.34	O. K.

TABULATION OF MISCELLANEOUS EXTRACTS.

Name.	Chemist's No.	Esters.	Alcohol.	Color.
Raspberry, ...	12755	None	20.24	Natural
Raspberry, ...	12777	None	30.72	O. K.
Raspberry, ...	12798	None	30.98	O. K.
Raspberry, ...	12979	None	15.84	Vegetable
Pineapple, ...	12776	None	31.10	O. K.
Jamaica ginger, ...	12796	Residue. 0.56	Ash. 47.16	No capsicum
Jamaica ginger, ...	12989	0.86	None 89.34	No capsicum
Celery extract, ...	13024	vol. oil 0.30%	83.16	O. K.
Pure extract peach, ...	13306	None	30.93	O. K.

On glancing over the foregoing descriptive list examples will be found of all kinds of extremes in labeling. They range from the simple statement of "Vanilla Extract" to statements making claims for superiority in quality and strength of the most ridiculously extravagant type. Certain points may here be explained with advantage. The word "Compound" was used at one time, before the advent of modern laws, to designate products which differed in strength, quality or purity from the genuine article. The word is totally inadequate and improper for this purpose. If it means anything it means that the article has had something added to it, while in its practical application it usually means that it is a diluted or weaker product. As a word to conjure with, some manufacturers seem to believe that the addition of the word "Compound" to any substandard product completely absolves them from any responsibility under the law. A ridiculous and exaggerated example, which, however, is perfectly true, came up at the time of the passage of the National Food and Drugs Act, ten years ago. There were so many products on the market at that time in which it was clearly seen that radical changes in the labels would have to be made in order to bring them into conformity with the law, that a Philadelphia retailer, becoming panic stricken at the idea of many illegal products being on his shelves, procured a large rubber stamp bearing the word "Compound" and stamped every package on his shelves with it. The trouble that he soon encountered from irate manufacturers of high class goods, who resented the imputation that their products were not all that they were claimed to be, can easily be imagined.

The use of such phrases as "highly concentrated," "double strength," "XXX," "unequaled in strength," "much stronger than extracts usually sold," etc., are usually unwarranted and are relics of the time previously mentioned when no standards existed, no laws were enforced and manufacturers of high grade goods had to use such expressions to show the proper ratio between their products and others bearing the same title. The National Association of Flavoring Extract Manufacturers particularly advises against the use of such expressions and they are becoming less frequently used than formerly, although they are still prevalent enough to warrant attention being called to them. It is unfair to the consuming public and unfair to the manufacturer of a full strength standard product, properly labeled without exaggeration, to permit a competitor to put upon the market an article not a whit better and label it in such a manner as to indicate that it is a superior product. The manufacturers themselves are realizing this and aiding in the enforcement of the laws providing for truthful labeling in every particular.

The words "imitation" and "substitute," as previously mentioned, are often misused in being applied simply to weaker preparations. In the case of vanilla extract the words are correctly applied to preparations which are made wholly or in part from tonka beans or the synthetic odorous principles, coumarin and vanillin, with or without the addition of genuine vanilla beans. In these preparations, the actual flavoring power is often much greater than in genuine vanilla extracts, but the aroma, although resembling vanilla is quite different when tonka or coumarin is used. These imitation extracts are in fact preferred by some users to the more delicate genuine vanilla flavor and there is a wide and legitimate field for the sale of such imitation extracts when properly labeled to show the distinction and difference from the genuine article.

It is a strange but true fact that some manufacturers will do almost anything to avoid the prominent use of the word "substitute." In one instance, the word "substitute" was in the same sized type as the word "Vanilla," but was so shaded as to be discernible only after a close examination of the package. Upon being communicated with regarding this apparent attempt to deceive the purchaser, the explanation was given that the printer had used the shading in order to create an artistic effect upon the label.

Instances of freak labels are sometimes encountered in which ignorance or error is responsible for such statements as the following: "Essence of Wintergreen, true fruit," (the product is not made from the fruit but the oil from the leaves is used). "Raspberry Extract, made from the choicest Mexican beans," (in this case a vanilla extract label had been copied and the word "raspberry" substituted without making the necessary change in phraseology); "Vanilla Extract, made from the fresh, ripe fruit" (the fresh ripe vanilla fruit has no aroma or flavor of vanilla as these properties are developed by a subsequent method of curing).

The use of the word "pure" is continued by manufacturers because of the association of ideas that it carries with it of both quality and strength. That there is need for the education of the public along this line is shown by the fact that a manufacturer can make two lots of extract of vanilla, using cheap, low grade beans in the one case and expensive, high grade beans in the other. Both of these products may justly be entitled to the designation "pure" or, what is frequently seen, "absolutely pure," and both may be in conformity with the legal standards while the actual value to the consumer may be in the ratio of 2 to 1 in comparing the flavoring power of the two extracts.

In connection with the tabulated statements of the analytical data, it may be stated that these are included for a matter of record and not for the purpose of enabling conclusions to be drawn by

those unaccustomed to interpreting such results. In the case of vanilla extract, no actual standards exist for the figures obtained in an analysis, the standard being: "Vanilla extract is the flavoring extract prepared from vanilla bean, with or without sugar or glycerine and contains in 100 Cc. the soluble matters from not less than 10 grammes of vanilla bean." This standard is based upon the formula previously official in the U. S. Pharmacopoeia under the name of Tincture of Vanilla, which has recently been transferred to the National Formulary IV, during the simultaneous revision of these two books of standards, which has just been completed. A product made strictly in accordance with the above standard will vary somewhat in certain of its characters, but will range about as follows: Residue, from 5% to 25%, depending upon whether sugar or glycerine or both have been added during the manufacture. Ash, less than 0.50%, unless the product has been made with the use of a larger amount of beans than directed in the standard process or has been extracted by the aid of alkali, as is sometimes done in low grade articles. Alcohol, ranging from 30% to 60%. Vanillin, ranging from 0.10% to 0.30%, unless the product has been made from or reinforced with synthetic vanillin, as is used in imitation vanilla extracts. Coumarin, not present in a genuine vanilla extract, but usually found in imitation extracts. Color, natural in genuine extracts, but consisting of caramel in whole or in part in imitation extracts. The lead number is a newly devised and arbitrary figure dependent upon the amount of lead compounds precipitated from a standard solution of a salt of that substance by the resins present in the extract and is supposed to be a measure of those minor and yet important flavoring constituents of vanilla bean. In a standard extract, the minimum figure for the lead number is found to be in the neighborhood of 40, a lesser figure indicating either deficiency of vanilla beans or that too weak an alcoholic menstruum was used in exhausting them. The lead number may also be too low when the extract has been made at too low a temperature.

In the 121 samples of vanilla extract examined and tabulated, no instance was found where wood alcohol was used to replace grain alcohol, nor did any of the samples contain acetanilid, which a few years ago was used extensively as an adulterant of the synthetic vanillin and in that manner found its way into commercial vanilla extracts. Five cases were prosecuted upon the technical charge of misbranding. These were samples numbered 12811, 12815 and 12840 (duplicate samples), 12870, 12888, 12913.

Lemon extract is required by the standards to contain 5% of oil of lemon and the terpeneless extract is required to contain not less than 0.2% of citral. The color may be natural or artificial, in the latter case a declaration being necessary.

In the 42 samples of lemon extract examined only four cases were found to merit prosecution, 12921, 13188, 13189, 13206, three for misbranding and one (12921) for the presence of wood alcohol. In justice to the seller of this preparation it may be said that upon investigation it was found to have been manufactured in 1902, fourteen years ago, at which time there was much less rigid enforcement of the few laws then existing and at a time when the poisonous properties of wood alcohol had not been fully confirmed. Citral determinations were made in a large number of the lemon extracts, the figures showing but few markedly substandard samples. As these determinations could not be completed, owing to inability to obtain the reagent necessary on account of the war, it was thought best to omit all of the figures for this determination.

Orange extract is required by the standards to contain 5% of the oil of orange and the terpeneless extract is required to conform to the regular extract in flavoring value, without any standards or requirements being set for it. Of the ten orange extracts none contained wood alcohol or other adulterants and only one sample was found to warrant prosecution (13161).

Almond extract is required by the standard to contain 1% of the oil of bitter almonds and to be free from the poisonous prussic acid present in the natural oil. The determinations were made in terms of benzaldehyde, of which 85 parts are equivalent to 100 parts of the oil. None of the 11 samples contained wood alcohol, nitrobenzol or prussic acid and none warranted prosecution.

Wintergreen extract is required by the standard to contain 3% of the oil of wintergreen. None of the 8 samples was found to be illegal.

Of the miscellaneous extracts of raspberry, pineapple, peach, celery and ginger, none was found to be illegal.

In connection with the regulation of the quality and purity of many commercial products of this type it may be well to call attention to the fact that it would be an advantage if in future legislative enactments specific standards or reference to authorities for such standards be incorporated, as in some States the courts have ruled that in the absence of such legislative reference no standards can be enforced, even if agreed upon by the majority of the members of the trade manufacturing such products.

The conclusions to be drawn from the above investigation are as follows:

First: The use of poisonous constituents, as wood alcohol, acetanilid, prussic acid, nitrobenzol, etc., has been entirely discontinued by manufacturers, the only sample in which wood alcohol was found having been made fourteen years ago.

Second: The flavoring extracts of the market are of much higher value than ever before, and much less frequently adulterated or misbranded, as is shown by less than a dozen cases for prosecution out of more than 200 samples examined.

Third. There is need for education on the part of the purchasing public to enable intelligent selection to be made from the numerous products offered for sale.

Fourth: Manufacturers should be compelled to avoid exaggeration and superlatives, in the labeling of these products. Many manufacturers of the highest grade products have already taken this stand and they should be protected from their unscrupulous competitors. The accompanying outlines of labels are submitted as suggestions to manufacturers which will enable them to avoid criticism in this respect. The word extract should be reserved, for the genuine article, as affording an added means of distinguishing the two classes of products.

EXTRACT
OF
VANILLA

STATE HOUSE
BRAND

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DIRECTIONS

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JAMES FOUST
Manufacturer
HARRISBURG, . . . PENNA.

IMITATION
VANILLA

STATE HOUSE
BRAND

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DIRECTIONS

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JAMES FOUST
Manufacturer
HARRISBURG, . . . PENNA.

VANILLA
SUBSTITUTE

STATE HOUSE
BRAND

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DIRECTIONS

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JAMES FOUST
Manufacturer
HARRISBURG, . . . PENNA.

